

Title (en)

CONTROL DEVICE FOR MOTOR, AND ELECTRIC POWER STEERING SYSTEM

Title (de)

STEUERUNGSVORRICHTUNG FÜR MOTOR UND ELEKTRISCHES SERVOLENKSYSTEM

Title (fr)

DISPOSITIF DE COMMANDE DE MOTEUR, ET SERVODIRECTION ÉLECTRIQUE

Publication

EP 3621195 A4 20200415 (EN)

Application

EP 17908232 A 20170502

Priority

JP 2017017278 W 20170502

Abstract (en)

[origin: EP3621195A1] A control device for a motor includes: a power converter (4) configured to control upper switching elements and lower switching elements to turn on and off in accordance with a drive command from a current control unit (3), to thereby supply electric power to a motor (1) ; a current sensor (5) arranged for the lower switching elements; and a failure determination unit (6) configured to determine whether or not the current sensor (5) has a failure. The current sensor (5) detects current errors in respective phases when each of the lower switching elements in the respective phases is turned off. The failure determination unit (6) obtains a current error determination value based on any one of: a magnitude of a sum of current error vectors in the respective phases each having a value of the current error in each of the phases as a magnitude; and values obtained by converting the current errors in the respective phases to Cartesian coordinates, to thereby determine whether or not the current sensor (5) has a failure.

IPC 8 full level

H02P 6/16 (2016.01); **B62D 5/00** (2006.01); **G01R 31/00** (2006.01); **H02P 6/28** (2016.01); **H02P 27/06** (2006.01); **H02P 29/024** (2016.01)

CPC (source: EP US)

B62D 5/0409 (2013.01 - US); **B62D 5/0463** (2013.01 - US); **B62D 5/049** (2013.01 - EP); **G01R 31/006** (2013.01 - EP); **G01R 31/42** (2013.01 - EP); **H02P 6/28** (2016.02 - EP); **H02P 21/13** (2013.01 - US); **H02P 21/22** (2016.02 - US); **H02P 27/12** (2013.01 - US); **H02P 29/024** (2013.01 - EP); **G01R 19/0092** (2013.01 - EP); **G01R 35/00** (2013.01 - EP)

Citation (search report)

- [A] JP 2009001055 A 20090108 - JTEKT CORP
- [A] US 2014091743 A1 20140403 - SUZUKI TAKASHI [JP], et al
- [A] JP 2003255006 A 20030910 - NISSAN MOTOR
- See references of WO 2018203393A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3621195 A1 20200311; **EP 3621195 A4 20200415**; **EP 3621195 B1 20210721**; CN 110574281 A 20191213; CN 110574281 B 20221118; JP 6698943 B2 20200527; JP WO2018203393 A1 20191107; US 11005402 B2 20210511; US 2020119674 A1 20200416; WO 2018203393 A1 20181108

DOCDB simple family (application)

EP 17908232 A 20170502; CN 201780089840 A 20170502; JP 2017017278 W 20170502; JP 2019516329 A 20170502; US 201716603867 A 20170502